

**OFFICIAL****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re reissue application of  
Haase  
Serial No.: 09/733,392  
Filed: December 7, 2000  
For U.S. Patent No. 5,846,435  
0170SS-45347

Group Art Unit: 1724

Examiner: C. Barry

In re Haase  
Reexamination Proceeding  
Control No. 90/005,710  
Filed: April 24, 2000  
For: U.S. Patent No. 5,846,435  
0170SS-44897

**COMMUNICATION IN RESPONSE**  
**TO THE DECISION TO MERGE OF MARCH 21, 2001**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Please enter the following amendments, contained on the attached sheets, in the respective cases as a housekeeping amendment to place the same claims in both of the above-referenced cases, as per the above Decision. A clean copy of the amended claims is provided for the Examiner's reference.

**Status and Support For Claim Changes**

Seventeen (17) claims are pending. Support for the amended claims 1, 2, 3, 15 and 16 is found in the examples on columns 7-9 and on column 5, line 2 to column 6, line 43. Support for claim 19 is found in claims 4 and 8 and on column 5, line 56/column 6, lines 20-21, among other places. It has been assumed herein, in making the requested "housekeeping amendment", that the Preliminary Amendment in the reissue application and the February 5, 2001 Amendment in the reexam application have both been entered. The Decision referenced above so indicated.

It is not believed that any fees are due, but notwithstanding the Commissioner is authorized to charge any fee deficiency to Deposit Account No.50-1753 (0170SS-44897).

Please note the new address and phone number, attached, for further communications on this matter.

Respectfully Submitted,

4/18/01  
Date

Sue Shaper  
Sue Z. Shaper  
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: David R. Crichton, Ciba Specialty Chemicals Corporation, 540 White Plains Road, P. O. Box 2005, Tarrytown, NY 10591-9005, on the date below:

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Name of Applicant, Assignee, or  
Registered Representative

Jeannie D. Harris  
Signature  
4/18/01  
Date

4/18/01

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**AMENDMENT TO SERIAL NO. 09/733,392**  
**AND CONTROL NO. 90/005,710**

Please amend the claims as follows:

- B1* 09/733,392-040002
1. (Amended) A method for dewatering biological sludge that has been digested by a thermophilic digestion process comprising:
- adding at least one polymeric quaternary ammonium compound[s], as a functionally primary component, to the biological sludge; [and]
  - adding at least one polyacrylamide to the biological sludge;
  - coagulating the biological sludge to form microflocs whereby said at least one polymeric quaternary ammonium compound functions as a primary component in forming microflocs; and
  - flocculating the microflocs with said at least one polyacrylamide such that [any] the combination[s] of the polymeric quaternary ammonium compound[s] and of the polyacrylamide[s] enhances dewatering of the sludge.
2. (Amended) The method for dewatering biological sludge according to claim 1, wherein the polymeric quaternary ammonium compound[s are] is from di-allyl di-methyl ammonium chloride (DADMAC) family.
3. (Amended) The method for dewatering biological sludge according to claim 1, wherein the polymeric quaternary ammonium compound[s are] is from epichlorohydrin di-methyl amine (epi-DMA) family.
- B2*
15. (Amended) A composition for dewatering biological sludge that has been digested by a thermophilic digestion process according to claim 1 comprising at least one polymeric quaternary ammonium compound[s], as a functionally primary component, and polyacrylamide, said components being present in the composition in a ratio to enable the at least one ammonium compound to function as a primary component in forming microflocs for the biological sludge and the composition to function as an agent for dewatering biological sludge from a thermophilic digestion process.
- B3*
16. (Amended) The method for dewatering biological sludge according to claim 1, wherein the polyacrylamide and the polymeric quaternary ammonium compound[s are] is used in solution or in dry form.

Please delete new claims 17 and 18, added by amendment to the reissue application,  
and add claim 19 as follows:

B4 <sup>Am 12c</sup> 2019 (New) The composition of claim 15 wherein the polyacrylamide is cationic or  
anionic.

208070-26666760

CLEAN COPY OF AMENDED CLAIMS

1. (Amended) A method for dewatering biological sludge that has been digested by a thermophilic digestion process comprising:

a. adding at least one polymeric quaternary ammonium compound, as a functionally primary component, to the biological sludge;

b. adding at least one polyacrylamide to the biological sludge;

c. coagulating the biological sludge to form microflocs whereby said at least one polymeric quaternary ammonium compound functions as a primary component in forming microflocs; and

d. flocculating the microflocs with said at least one polyacrylamide such that the combination of the polymeric quaternary ammonium compound and of the polyacrylamide enhances dewatering of the sludge.

2. (Amended) The method for dewatering biological sludge according to claim 1, wherein the polymeric quaternary ammonium compound is from di-allyl di-methyl ammonium chloride (DADMAC) family.

3. (Amended) The method for dewatering biological sludge according to claim 1, wherein the polymeric quaternary ammonium compound is from epichlorohydrin di-methyl amine (epi-DMA) family.

15. (Amended) A composition for dewatering biological sludge that has been digested by a thermophilic digestion process according to claim 1 comprising at least one polymeric quaternary ammonium compound, as a functionally primary component, and polyacrylamide, said components being present in the composition in a ratio to enable the at least one ammonium compound to function as a primary component in forming microflocs for the biological sludge and the composition to function as an agent for dewatering biological sludge from a thermophilic digestion process.

16. (Amended) The method for dewatering biological sludge according to claim 1, wherein the polyacrylamide and the polymeric quaternary ammonium compound is used in solution or in dry form.

19. (New) The composition of claim 15 wherein the polyacrylamide is cationic or anionic.

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**SUE Z. SHAPER, P.C.**

2925 Briarpark

Suite 930

Houston, Texas 77042

U.S.A.

(713) 550-5710 - Office

(713) 550-5709 - Fax

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208070.26855760

☐ New Application for ☐ Patent ☐ Trademark  
☐ Reg. App. ☐ Prov. ☐ Conversion w/priority: ☐ Yes ☐ No  
☐ Continuation ☐ CIP ☐ Divisional ☐ PCT ☐ CPA  
☐ Foreign Priority claimed ☐ Pages of Specification ☐ APR 18 2001  
☐ Number of Claims ☐ Sheets of Drawings ☐ Abstract  
☐ Declaration ☒ Power of Attorney ☐ Check \$  
☒ Authorization to charge Deposit Account 06 05 30 08 1485  
☐ Assignment ☐ Small Entity Statement ☐ Info. Disc. State. 45897  
☐ Amendment ☐ Issue Fee ☐ Formal Drawings  
☒ Other COMMUNICATION IN RESPONSE TO THE DECISION TO MERGE of  
~~MAILED 2001 AND SUBMIT TO SERIAL NO. 091733, 342 AND~~  
~~CONTR. NO. 901005, 710 + CLEAN COPY OF AMENDED~~  
 INVENTOR RICHARD ALAN HAASE CLAIMS  
 CLIENT CLARVALVE, INC.  
 TITLE METHOD OF DEWATERING SLUDGE  
901005, 710  
 Serial No. 091733392 Express Mail No. EF397565638 US  
 Due Date 4/2/01 Mailed 4/18/01 Atty S25  
 Docket No. 017055 Matter No. 45347 dlf

091733392  
 20010418

☐ New Application for ☐ Patent ☐ Trademark  
☐ Reg. App. ☐ Prov. ☐ Conversion w/priority: ☐ Yes ☐ No  
☐ Continuation ☐ CIP ☐ Divisional ☐ PCT ☐ RCE  
☐ Foreign Priority claimed ☐ Pages of Specification  
☐ Number of Claims ☐ Sheets of Drawings ☐ Abstract  
☒ Declaration ☒ Power of Attorney ☐ Check \$  
☒ Authorization to charge Deposit Account (06-05805017055)  
☐ Assignment ☐ Small Entity Statement ☐ Info. Disc. State. 44897)  
☐ Amendment ☐ Issue Fee ☐ Formal Drawings  
☒ Other COMMUNICATION IN RESPONSE TO THE DECISION TO REEVALUATE  
OF MARCH 21, 2001, AMENDMENT TO SERIAL NO. 09/1733392, 392 AND  
INVENTOR CONTROL NO. 9010057185 C. 9010057185 AND  
Inventor RICHARD A. HAASE  
Client CLEARVALVE INC.  
Title METHOD OF DEWATERING SLUDGE  
09/1733392  
Serial No. 09/1005718 Express Mail No. EF397565638US  
Due Date 4/12/01 Mailed 4/18/01 Atty 525  
Docket No. 017055 Matter No. 44897

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